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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,919	02/08/2002	Biagio Bisanti	TI-32512	2279

23494 7590 07/13/2005

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EXAMINER

NGUYEN, SIMON

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/071,919	BISANTI ET AL.	
	Examiner	Art Unit	
	SIMON D. NGUYEN	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 is/are allowed.
- 6) ☒ Claim(s) 10-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 10-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, the term "a comparator having an output port for providing a phase information signal" contains a subject matter which was not described in the specification and in the contrast with the specification and independent claim 1.

Regarding claims 15 and 18, the term "circuitry for injecting the injection modulation signal into the phase lock loop at a point before the loop filter" contains a subject matter which was not described in the specification.

Regarding dependent claims 11-14, 16-17, 19-20, these claims are rejected since the independent claims have been rejected under 35 U.S.C 112, first paragraph.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by McCune, Jr. et al. (5,952,895).

Regarding independent claim 10, McCune, Jr. discloses a RF modulator (fig.4) having a PLL producing a modulated RF signal; a phase demodulator (419) for receiving the modulated RF signal and providing a phase information signal; and a comparator (417) for receiving the unmodified modulated RF signal (an output of the demodulator) and having an output port for providing an error signal (fig.4, column 3 lines 11-62).

Regarding dependent claims 11-14, components use in a modulator such as a phase delay, a PLL having a detector, a charge pump, a LPF, and a VCO are well-known in the art and the applicant can be seen either in the prior art of McCune or the cited prior art.

5. Claims 15 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Dent (5,834,987).

Regarding independent claims 15 and 18, Dent discloses an RF modulator (fig.6), comprising: a PLL (fig.3); a circuitry for producing an injection modulation signal

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(120, 123 of fig.3); circuitry for injection (add) a modulation signal into the PLL at a point before the loop filter (injecting second stream from filter 123 to 101 then loop filter 102 (fig.6, column 8 lines 48-50, column 10 lines 40-51).

6. Claims 15 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Beard (6,731,713).

Regarding independent claims 15 and 18, Beard discloses an RF modulator (fig.5), comprising: a PLL ; a circuitry for producing an injection modulation signal (106)); circuitry for injection (add) a modulation signal into the PLL at a point before the loop filter (injecting at 118 (fig.5, column 5 lines 7-48).

7. Claims 15 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Mattisson et al. (6,734,749).

Regarding independent claims 15 and 18, Mattisson discloses an RF modulator (fig.2, 3), comprising: a PLL; a circuitry for producing an injection modulation signal (34, 36); circuitry for injection (add) a modulation signal into the PLL at a point before the loop filter (injecting an modulation signal to adder 28 (figs.2-3).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent in view of McCune.

Regarding claims 16-17, Dent fails to disclose a demodulator.

McCune discloses a demodulator and a comparator (fig.4). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Dent, modified by McCune in order to reduce error of the modulated signal.

Allowable Subject Matter

10. Claims 1-9 are allowed.

11. The following is an examiner's statement of reasons for allowance:

Regarding claims 1 and 7, McCune, Jr. discloses a RF modulator (fig.4), comprising: a PLL for receiving a modulation signal (MOD) and producing a modulated RF signal (an output of VCO); a phase demodulator (419) receives the modulated RF signal via an mixer (420) and produces a phase information signal; a comparator (417) having two inputs, wherein a first input is the phase information signal from the demodulator and a second input is the modulation signal, and output an error signal, wherein the error signal inputted to a gain amplifier (411).

This reference does not specifically teach the error signal inputted to a pre-emphasis filter and the modulated signal outputted from the PLL directly inputs to the phase demodulator (the modulated signal mixes with a synthesizing signal and produce an output signal wherein the output signal inputted to the modulator).

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Regarding claim 2-6, 8-9, these claims are allowed as being dependent upon independent claims that have been allowed.

Response to Arguments

12. Since independent claims 10, 15, and 18 have been rejected under 35 U.S.C 112, first paragraph, the Examiner should stop right there, waiting for the Applicant to amend the claims. The rejections of these claims just prove that the claimed invention have been invented by others.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

600 Dulany, Alexandria, VA 22314

Or faxed to:


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(571) 273-8300 (for formal communications intended for entry)

Hand-delivered response should be brought to Customer Service Window
located at the Randolph Building, 401 Dulany, Alexandria, VA, 22314.

Simon Nguyen

July 11, 2005


SIMON NGUYEN
PRIMARY EXAMINER